

11-1997

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**DOI:** <https://doi.org/10.1037/0022-3514.73.5.923>

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## Citation

CHIU, Chi-Yue, DWECK, Carol S., TONG, Jennifer Yuk-Yue, & FU, Ho-Ying. (1997). Implicit theories and conceptions of morality. *Journal of Personality and Social Psychology*, 73(5), 923-940.

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## Implicit Theories and Conceptions of Morality

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In this article, the authors propose that individuals' moral beliefs are linked to their implicit theories about the nature (i.e., malleability) of their social-moral reality. Specifically, it was hypothesized that when individuals believe in a fixed reality (entity theory), they tend to hold moral beliefs in which *duties* within the given system are seen as fundamental. In contrast, when individuals believe in a malleable reality (incremental theory), one that can be shaped by individuals, they hold moral beliefs that focus on moral principles, such as human rights, around which that reality should be organized. Results from 5 studies supported the proposed framework: Implicit theories about the malleability of one's social-moral reality predicted duty-based vs. rights-based moral beliefs.

Moral philosophers have long noticed that every moral belief embodies an implicit theory of the society and an implicit theory of the person (see, e.g., Sandel, 1984). Indeed, the idea that implicit theories are central to people's moral beliefs has found its way into major psychological theories of human morality (Hogan & Emler, 1978; Sampson, 1983; Shweder & Bourne, 1982; Shweder & Miller, 1985; see also Turiel, 1994). In this article, we are interested in how individuals conceive of morality (i.e., how they justify the moral rightness of human actions), and in how their conceptions of morality are related to their implicit theories about the world and people's character.

In a broader context, it has also been suggested that individuals' moral beliefs and their implicit theories about the nature of the world and people are coherently organized into a belief, or meaning, system (Epstein, 1989; Janoff-Bulman, 1985; see also Johnson, Germer, Efran, & Overton, 1988; Murphy & Medin, 1985; Schwartz, 1992). For example, Epstein (1989) proposed that individuals extract moral values from their experiences within an implicit theory of reality, which contains a theory of the person and a theory of the world. In this article, we also suggest how moral beliefs and implicit theories form a coherent meaning system for an individual.

### Duty-Based Versus Rights-Based Morality

With respect to conceptions of morality, Dworkin (1978; see also Shweder, Mahapatra & Miller, 1987; Shweder & Miller, 1985) has identified two main classes of moral beliefs: (a) duty-based moral beliefs, in which duty is the fundamental justification for the moral rightness of human action, and (b) rights-based moral beliefs, in which human rights are the fundamental justification for the moral rightness of human action.<sup>1</sup> Dworkin has suggested that although all ethical codes have some place for individual duties and individual rights, they differ in the priority given to one over the other. A duty-based morality would take some duty (such as the duty to fulfill one's role expectations) as fundamental whereas a rights-based morality would take some right (such as the right to equal opportunity) as fundamental.

There are several reasons that an individual's implicit theories about the world and people's morality should predict duty-based or rights-based morality.

First, among the most basic elements in a moral belief are the agents of moral actions—most typically other people or the world and its institutions. Because other people and the world are the sources of moral actions, people's beliefs about these factors should have important implications for their moral beliefs. People can believe, for example, that the world and its people have fixed natures, that is, that they live in a world of fixed givens. Alternatively, they can believe that the world, its institutions, and its people have a character that can be shaped. In this article, we propose that implicit theories about the fixedness or malleability of the world and human character are sys-

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We thank Susi Arden, Ying-yi Hong, and Mara Novak for their help in data collection and data analysis and Melvin Lerner and Seymour Epstein for comments on earlier drafts of this article.

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<sup>1</sup> A third kind of moral belief identified by Dworkin (1978) is the goal-based belief, which takes some goal as fundamental. However, unlike duty-based and rights-based morality, which are both predicated on conceptions of an individual's choices and conduct in a society, goal-based morality is predicated on conceptions of the goals of politics and is hence more remote from the present analysis.

tematically related to individual's duty based versus rights based.

As noted, individuals may conceive of the world and people's character as fixed entities, or they may conceive of them as more fluid, malleable variables (Dweck & Leggett, 1988; Dweck, 1991). Individuals holding the former belief are referred to as entity theorists, because they believe that these factors are static entities that cannot be molded or changed; individuals holding the latter belief are known as incremental theorists, because they believe that these factors can be shaped, cultivated, or improved.

When individuals believe that they live in a fixed reality with a rigid moral order, perhaps the most important criterion for deciding the morality of a state of affairs is whether the moral agents (people and social institutions) have carried out the duties prescribed by the existing moral order. However, when individuals believe that the world they live in is malleable, they may instead seek principles in terms of which the world should be shaped. That is, the authority of the existing moral order is no longer absolute, and one's duty within it is not the primary concern. Instead, to them the primary concern would be to identify, work toward, and uphold principles (such as respect for human rights) that will guide the society and its moral agents. The defining issue of morality becomes whether such principles or rights are fostered and protected. Thus, we hypothesized that individuals who have an entity theory of the world and moral character would have a greater preference for duty-based moral beliefs than those who have an incremental theory. Conversely, we predicted that individuals who have an incremental theory of the world and moral character would have a greater preference for rights-based morality than those who have an entity theory.

Second, when one believes in a fixed social-moral reality, one may invest in the status quo, and one's moral orientation would be toward supporting the status quo. By contrast, when one believes in a more dynamic, malleable social-moral reality, one should be oriented toward moral beliefs that allow and support changes. Whereas duty-based morality is a system-oriented morality that serves to maintain the status quo, rights-based morality is a person-centered morality that promotes social change.

Indeed, there is evidence that a moral code that emphasizes duties and rules, with its focus on sanctioning deviance, may function to maintain the status quo and hence social stability (Staub, 1989). In contrast, the relation between rights-based beliefs and an orientation toward social change is well illustrated in the Declaration of Independence of the Thirteen United States of America, 1776, which states,

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights. . . . That to secure these rights, Governments are instituted among Men. . . . That whenever any form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government.

The Declaration of Independence clearly endorses a rights-based morality and the view that even long-established social and political institutions can and should be changed when these institutions violate people's rights.

Observing the rapid social political changes in Eastern Europe in the late 1980s, political philosopher Robert Heilbroner (1991) reached the same conclusion as we did about the relation between implicit theories and moral beliefs. On the basis of his observations, Heilbroner (1991) concluded that the fundamental difference between political thought that emphasizes individual rights and political thought that emphasizes preservation of the status quo (e.g., existing norms and duties) "lies in the diametrically opposed assumptions as to the fixity or malleability of human behavior," whether it is believed "that there is a core [in human nature] that resists historical change" or that human nature is "plastic and therefore capable of being shaped through social experience" (p. 20).

For the above reasons, we predicted that an entity theory of the world and moral character would be associated with a preference for duty-based moral beliefs, beliefs that serve to maintain the status quo, and that an incremental theory would be associated with a preference for rights-based moral beliefs, beliefs that allow, promote, and guide social change.

### Overview of the Studies

In the present research, the hypothesized relation between individuals' implicit theory and their conception of morality was tested in five studies. In Study 1, we asked participants to choose between statements depicting a duty-based moral belief and statements depicting a rights-based moral belief. In Study 2, we confronted the participants with a particular moral belief and allowed them to disagree with, correct, and argue against it. In Studies 3 and 4, duty-based morality and rights-based morality were operationalized through their implications for reward and punishment assignment. To establish the cross-cultural generality of our findings, in Study 5, we examined the relation of implicit theories and duty- versus rights-based morality in a Chinese society, which, when compared with America, was expected to be a relatively duty-based society. In each study, we predicted a stronger preference for duty-based morality and a weaker preference for rights-based morality among entity theorists than among incremental theorists.

### Study 1

#### Method

**Participants.** The participants were 121 undergraduate students (58 men, 63 women) at Columbia University. Among them, 80 were introductory psychology students who participated in the study to fulfill course requirements. The remaining 41 were paid \$5.00 for their participation in the study. The average age of participants was 19.86 years ( $SD = 2.84$ ).

**Assessment of implicit theories.** Participants' implicit theories about the malleability of people's moral character and the world were assessed by an implicit theories of morality measure and an implicit theories of the world measure, respectively (Dweck, Chiu, & Hong, 1995b), which were modeled on the theories of intelligence measure developed by Dweck and Henderson (1988). The theories of intelligence measure consisted of three items, each depicting intelligence as a fixed entity (e.g., "You have a certain amount of intelligence and you really can't do much to change it"). Participants were asked to indicate how much they agree with the item on a 6-point scale, from 1 (*very strongly agree*) to 6 (*very strongly disagree*). Those with high scores on this measure

were considered incremental theorists and those with low scores were considered entity theorists in the domain of intelligence.

The implicit theories of morality measure and the implicit theories of the world measure had the same format as the implicit intelligence theory measure. The implicit theories of morality measure consisted of three items, each depicting an entity view of people's morality (e.g., "A person's moral character is something very basic about them and it can't be changed much"). The implicit theories of the world measure consisted of three items, each depicting an entity view of the world (e.g., "Some societal trends may dominate for a while, but the fundamental nature of our world is something that cannot be changed much"). All the items are presented in Table 1. Respondents were instructed to indicate their degree of agreement with each item on a 6-point scale, from 1 (*very strongly agree*) to 6 (*very strongly disagree*). Low scores on these items represented endorsement of an entity theory; high scores (disagreement with nonmalleability) were taken to be endorsement of an incremental theory in these domains.

Unlike other individual differences measures, which are intended to measure generalized needs or cognitive styles, implicit theory of malleability is a unidimensional construct defined by a unitary idea. To avoid continued repetition of this idea, which is not necessary for high reliabil-

ity (see below) and was irksome for our participants, only a small number of items were included in the measure.

Items depicting the incremental theories were not included in the implicit theory measures because pilot studies showed that most participants, when reading an explicit statement of the incremental theory, drift toward these choices over items. This suggests that the incremental items are compelling. However, to ensure that disagreement did in fact represent endorsement of an incremental theory, we asked an independent sample of 60 participants to justify their responses. All participants who disagreed with the entity theory statements ( $n = 25$ ) spontaneously espoused an incremental theory (see Dweck, Chiu, & Hong, 1995a for more details).

Moreover, Levy and Dweck (1996) obtained direct evidence that disagreement with an entity theory on the present measure can be taken to represent agreement with incremental theory. They developed expanded measures of implicit theories. For each domain (e.g., the moral domain), the measure consists of eight items, four entity items (the three entity items in the present measure and one additional one) and four incremental items. To make the incremental theory items less socially desirable, Levy and Dweck used incremental items that depict a strong form of incremental theory (e.g., "The basic moral characteristics of a person

Table 1  
Factor Structure of the Theory Measures in Studies 1, 2, and 3

| Item   | Factor loading |            |            |            |            |            |            |            |            |
|--|----------------|------------|------------|------------|------------|------------|------------|------------|------------|
|  | Study 1        |            |            | Study 2    |            |            | Study 3    |            |            |
|  | 1              | 2          | 3          | 1          | 2          | 3          | 1          | 2          | 3          |
| Measure of world theories  |                |            |            |            |            |            |            |            |            |
| Though some phenomena can be changed, it is unlikely that the core dispositions of the world can be altered.                     | .14            | .06        | <b>.84</b> | -.08       | -.08       | <b>.83</b> | .18        | .04        | <b>.79</b> |
| Our world has its basic and ingrained dispositions, and you really can't do much to change it.                                   | .21            | .16        | <b>.78</b> | .28        | .03        | <b>.85</b> | .14        | .22        | <b>.71</b> |
| Some societal trends may dominate for a while, but the fundamental nature of our world is something that cannot be changed much. | .12            | .19        | <b>.77</b> | .11        | .06        | <b>.84</b> | .02        | .14        | <b>.63</b> |
| Measure of morality theories   |                |            |            |            |            |            |            |            |            |
| A person's moral character is something very basic about them and it can't be changed much.                                      | .00            | <b>.86</b> | .15        | .07        | <b>.85</b> | .00        | -.04       | <b>.70</b> | .31        |
| Whether a person is responsible and sincere or not is deeply ingrained in their personality. It cannot be changed very much.     | .08            | <b>.76</b> | .12        | .13        | <b>.83</b> | .01        | .14        | <b>.80</b> | .02        |
| There is not much that can be done to change a person's moral traits (e.g., conscientiousness, uprightness, and honesty).        | .06            | <b>.90</b> | .12        | .07        | <b>.93</b> | -.01       | .10        | <b>.95</b> | .18        |
| Measure of intelligence theories   |                |            |            |            |            |            |            |            |            |
| You have a certain amount of intelligence and you really can't do much to change it.   | <b>.96</b>     | .04        | .17        | <b>.95</b> | .13        | .20        | <b>.95</b> | .01        | .15        |
| Your intelligence is something about you that you can't change much.   | <b>.84</b>     | .06        | .16        | <b>.92</b> | .16        | .20        | <b>.96</b> | .05        | .14        |
| You can learn new things, but you can't really change your basic intelligence.   | <b>.88</b>     | .06        | .16        | <b>.83</b> | .04        | .23        | <b>.91</b> | .16        | .08        |

Note. Values in boldface are factor loadings above .70.

can be changed significantly, no matter who this person is"; "Even the most basic moral qualities of a person can be changed"). These items appear to have avoided the overly compelling nature of the incremental items. Validation studies performed in both the United States and Hong Kong revealed a huge overlap in the classification of incremental theorists on the present and the expanded measures. For example, in one study, 120 participants filled out the expanded measure of implicit theories of morality. Of those who were classified as incremental theorists on the present measure, 91% were classified as incremental theorists on the expanded measure (meaning that those who disagreed with entity theory statements on the previous measure agreed with the incremental statements on the expanded measure). Of those who were classified as entity theorists on the present measure, 86% were classified as entity theorists on the expanded measure (meaning that they disagreed with incremental statements on the expanded measure). The correlation between the present measure (which consists of entity items only) and the expanded measure was .88. A factor analysis performed on the expanded measure showed that the first factor had an eigenvalue of 4.14, accounting for 52% of the total matrix variance, and was the only factor with eigenvalue greater than 1. All the incremental items had positive loading ( $> .50$ ), and all the entity items had negative loading ( $< -.67$ ) on the first factor. Together, these findings showed that disagreement with entity items on the implicit theory measures can be taken to represent agreement with incremental items.

Entity versus incremental theories of intelligence were also measured to assess possible method variance due to the format of the theory measures.

Extensive evidence attesting to the reliability and validity of the theory measures is reported in Dweck et al. (1995b). The test-retest reliability for a 2-week interval is .79 for the world theory measure, .80 for the morality theory measure, and .80 for intelligence theory measure. As far as convergent validity is concerned, each implicit theory predicts theoretically meaningful patterns of judgments, inferences, and responses (Chiu, Hong, & Dweck, 1997; Hong & Chiu, 1997; see Dweck et al., 1995b; Dweck, Hong, & Chiu, 1993, for reviews). For example, agreement with an entity theory of morality is positively related to the tendency to infer fixed moral traits from moral behavior (Chiu et al., 1997). Hong and Chiu (1997) also reported evidence that agreement with an entity theory of the world is positively related to tendency to perceive the Sino-Hong Kong relations during the 1997 political transition in Hong Kong as part of an unchangeable reality.

None of the three measures correlates with standard measures of self-presentation concerns (the Social Desirability Scale, Paulhus, 1984, or the Self-Monitoring Scale, Snyder, 1974), intellectual abilities (SAT scores or the Academic Promise Test, Bennett et al., 1965), self-esteem (the Self-Esteem Inventory, Coopersmith, 1967), or political attitudes (conservatism and liberalism scales, Kerlinger, 1984), indicating that the implicit theory measures are not confounded with these other variables (see Dweck et al., 1995b).

Finally, to ensure that the relation between participants' implicit theories and their endorsement of a particular moral belief was not mediated by their confidence in other people's morality or with their satisfaction with the world, we also assessed the participants' satisfaction with (or perceived "goodness" of) people's morality and the world. The confidence-satisfaction measure consisted of six pairs of items (e.g., "I believe that most people will take advantage of others if they can" vs. "I believe that most people are trustworthy"; "In general, I am satisfied with the world and the way it is" vs. "In general, I am disappointed of the world and the way it is"). The participants were asked to choose one statement from each pair and rate it using a 3-point scale, ranging from 1 (*very true for me*) to 3 (*sort of true for me*). Responses to each item were later recoded into a scale from 1 to 6 with a higher score indicating higher confidence and satisfaction. The unweighted mean of

the six items (with  $\alpha = .81$ ) was used to form the confidence-satisfaction measure.

To further explore the discriminant validity of the implicit theories measures, participants also filled out Levenson's (1974) locus of control questionnaire.

*Assessment of moral beliefs.* Four statements were used to assess the extent to which participants endorsed duty-based versus rights-based moral beliefs. Two of these statements embodied a violation of moral principles that are based on moral duties prescribed by norms, social roles, laws, and the rule of equity; two embodied a violation of moral principles that are based on individual rights or the right to equal opportunity. Each statement was pitted against every other statement, and participants were asked to choose the one that was more unacceptable for them. We chose to ask the participants how unacceptable violation of a particular moral principle was for them rather than directly asking them how important this principle was to them because our pilot data suggested that how important a moral rule is for a person will become more apparent when it is violated (see also Karniol & Miller, 1981).

These statements were (a) "People do not follow the norms and rules of society and do not act according to what is expected of their roles" (norms and role expectations); (b) "People who have made contributions to society are not rewarded and people who break the law and order of society are not punished" (equity and laws); (c) "People do not respect one another's individuality, self-esteem and human rights" (individual rights); and (d) "Our society does not provide equal opportunity to everybody" (equal opportunity). Norms and role expectations along with equity and laws are duty-based morality because they are concerned with conformity to the duties prescribed by some preexisting social arrangements (e.g., norms, role expectations, laws). In contrast, individual rights and equal opportunity are rights-based beliefs, because they demand that liberty and equal rights be the fundamental justifications for social arrangements—that is, social arrangements should be made in a way that assures each individual maximum liberty and a maximum likelihood of fulfilling his or her potential.<sup>2</sup>

*Procedures.* The questionnaires were administered to the participants by a female experimenter in groups of 3 to 15 in the following order: the implicit theories measures, the locus of control inventory, and finally the moral beliefs questionnaire.

## Results

As an overview, we found that the reliability of the theory measures was high and that there were clear systematic relationships between individuals' implicit theories and their moral beliefs.

*Factorial structures and reliability of the theory measures.* The nine items measuring implicit theories about the malleability of the world, people's morality, and intelligence were subjected to factor analysis. Three factors, which accounted for 85% of the matrix variance, were extracted on the basis of the result of the scree test. The factors were rotated to an orthogonal structure using the varimax procedure to facilitate interpretation,

<sup>2</sup> In this questionnaire, we also measured other moral beliefs. Because these beliefs are not relevant to duty-based or rights-based beliefs, they were not included in the analyses reported. Examples of these beliefs are: "The procedures used in allocating social goods are flawed because of personal biases and corruption" (procedural justice belief) and "Our privileges and responsibilities are not clearly delineated in our Constitution and our laws are not effectively enforced" (legal justice belief). As predicted, however, entity and incremental theorists did not differ in their endorsement of these beliefs.

and the rotated factor loading matrix is presented in Table 1. As shown in Table 1, a simple factor structure emerged. The three intelligence theory items loaded highly on Factor 1 (loadings ranged from .88 to .96), whereas the three people's morality theory items loaded highly on Factor 2 (loadings ranged from .76 to .90), and the three world theory items loaded highly on Factor 3 (loadings ranged from .77 to .84). Other factor loadings were below .31. The results suggest that theories about intelligence, people's morality, and the world are independent of one another. This independence suggests that the participants' endorsement of the theories was not due to an acquiescence set or to method variance.

Three scales were then constituted to index world theory, morality theory, and intelligence theory, using the unweighted means of their respective items ( $\alpha = .86$  for the world theory, .89 for the morality theory, and .96 for the intelligence theory).

In order to include only those participants who were clearly entity theorists and those who were clearly incremental theorists, we included in the subsequent analyses only those participants who scored above the midpoint (3.5, range from 1 to 6) on both the morality theory and the world theory (incremental theorists,  $n = 32$ ) and those who scored below the midpoint on both theory measures (entity theorists,  $n = 35$ ). However, given that these two theory measures were statistically independent, we also present results from analyses in which the contributions of the two theories to moral beliefs were independently assessed and no participants were excluded.

**Moral beliefs.** In our moral beliefs questionnaire, the four moral beliefs were pitted against one another, forming 6 items. Participants were required to check one belief on each item. To explore the relation between moral beliefs and implicit theories about the world and people's morality, we compared how many entity theorists and incremental theorists chose each of the beliefs. Because the statements depicting the rights-based moral beliefs were more appealing for American students, the focus of our analyses is on the between-group differences in the percentages of participants choosing a particular belief rather than on the absolute percentage of people choosing the belief. For example, most participants (88%) in the present study chose individual rights when it was pitted against norms and role expectations. However, given this, incremental theorists, compared with entity theorists, still showed a significantly greater tendency to choose individual rights rather than norms and role expectations (97% vs. 80%).

As shown in Table 2, every time a rights-based belief was pitted against a duty-based belief, significantly more incremental theorists than entity theorists chose the rights-based belief (meaning, of course, that significantly more entity theorists than incremental theorists chose the duty-based belief). However, when the two duty-based beliefs were pitted against each other, or when the two rights-based beliefs were pitted against each other, entity and incremental theorists did not differ significantly in their preference for one belief over the other. Thus, our major hypothesis was supported.

Next, a discriminant function analysis was performed on the four items on which a duty-based belief was pitted against a rights-based belief. The predictors were the world theory, the morality theory, the confidence-satisfaction measure, and the three locus of control scales (expectancies of control by internal

factors, by powerful others, and by chance).<sup>3</sup> All the participants were included in these analyses. The results of these analyses are presented in Table 3. As revealed in Table 3, when the item involving individual rights (a principle that focuses on the individual) was pitted against the two duty-based beliefs, those who held a malleable view of people's morality, compared with participants who held an entity view of morality, were significantly more likely to choose individual rights. When equal opportunity (a principle that focuses on societal structure), another rights-based belief, was pitted against the two duty-based beliefs, participants who held a malleable view of the world were more likely to choose the rights-based belief.

These findings are consistent with the distinction between microjustice and macrojustice in the literature on moral values (Brickman, Folger, Goode, & Schul, 1981). Microjustice refers to those properties in interpersonal relationships that would make the relationships seem either fair or unfair. In contrast, macrojustice refers to those integral properties characteristic of the whole social system that would make the system appear to be just or unjust. This framework can be used to understand the difference between liberty and equal opportunity. Although a commitment to liberty can be a principle on which a society is based, it is usually evaluated at the interpersonal level in terms of whether agents of morality respect one another's individuality, esteem, and rights. These demands are more applicable in the interpersonal realm (microjustice), whereas equality of opportunity is a structural property of a social system that can be evaluated only across the society as a whole (macrojustice). Our study showed that preference for microjustice beliefs could be predicted better by theories of individuals' moral attributes, whereas the preference for macrojustice beliefs could be predicted better by theories of the whole social system or the world. Thus, while the more general implicit theories measure (e.g., a composite index of world and morality theories) predicted preferences for duty-based versus rights-based moral beliefs, more specific implicit theories measures predicted preferences for specific rights-based moral beliefs over duty-based beliefs. Because we were more interested in predicting people's general preference for duty-based versus rights-based morality, in the next four studies, our analysis focuses on the more general theory (world and morality).

As Table 3 also shows, internal locus of control predicted a preference for duty-based moral beliefs over individual rights. This finding is consistent with previous research findings that individuals with an internal locus of control tend to be more approving of the existing social order and its accompanying social expectations and duties (e.g., Carroll, Perkowitz, Lurigio, & Weaver, 1987; Lipkus, 1991). Finally, there were no systematic relations between the preference for duty-based versus rights-based moral beliefs and other predictors (the confidence-satisfaction measure and the external locus of control measures).

<sup>3</sup> We also included the participants' gender in our original discriminant function analyses. However, because no significant gender effect was found in these analyses, this variable was dropped in our final analysis. No gender effects (main effects or interactions) were found in Studies 2, 3, 4, or 5, and thus gender was not included as a factor in the analyses reported.

Table 2  
*Preferences for Moral Beliefs as a Function of Theories About the World and People's Morality*

| Choice   | Entity theorists (%) | Incremental theorists (%) | z value for difference in proportions |
|--|----------------------|---------------------------|---------------------------------------|
| Equal opportunity rather than equity and laws            | 43                   | 73                        | -2.61*                                |
| Equal opportunity rather than norms and role expectation | 83                   | 97                        | -1.99*                                |
| Individual rights rather than equity and laws            | 66                   | 87                        | -2.11*                                |
| Individual rights rather than norm and role expectation  | 80                   | 97                        | -2.30*                                |
| Equal opportunity rather than individual rights          | 43                   | 47                        | -0.33                                 |
| Equity and laws rather than norm and role expectation    | 80                   | 87                        | -0.78                                 |

\*  $p < .05$ .

In summary, participants' implicit theories were related to their moral beliefs in the predicted directions. Taken together, the findings from this study provide preliminary support for the hypothesized relation between implicit theories and moral beliefs.

### Study 2

To further explore the relation between implicit theories and moral beliefs, we assessed the moral beliefs of the participants in this study through a *belief confrontation* technique. Participants were confronted with a particular moral belief and were allowed to disagree with, correct, and argue against it. Again, we predicted that individuals who believe that the world and other people's morality are fixed would be more likely to display a duty-based versus rights-based morality on this measure compared with individuals who think that the world and other people's morality are malleable or cultivatable.

### Method

**Participants.** The participants were 81 Columbia University students (41 men, 40 women) who had not participated in Study 1. They were paid \$5.00 for their participation.

**Measures of implicit theories.** Participants' implicit theories about the world, people's morality, and intelligence were measured by means of the same questionnaires used in Study 1. As shown in Table 1, the factorial structure of the theories found in Study 1 was successfully replicated.

**The belief confrontation technique.** A belief confrontation technique was developed to measure the participants' duty-based versus rights-based moral beliefs. The aim of this technique was to present individuals with a passage that expressed a particular moral belief in a way that allowed them to spontaneously generate their own moral beliefs if they had different beliefs. At the same time, the range of responses was constrained, because all responses were focused on a central theme. Three passages were used in the present study to assess different facets of duty-based morality versus rights-based morality.

The first passage expressed a prototypical duty-based moral belief, as described in Dworkin (1978). The participants were first asked to rate the extent to which they agreed with this passage on a 4-point scale, ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). Then, they were asked to cross out parts of the passage they disagreed with and to make corrections on the passage so that the corrected passage would correspond as closely as possible to their own beliefs. The presented passage was:

People are capable of adhering to society's minimal standards of morality. Therefore, it is the duty of every person to meet these

Table 3  
*Preferences for Moral Beliefs as a Function of Implicit Theories and Confidence and Locus of Control*

| Choice  | Incremental theory of morality | Incremental theory of the world | Confidence-satisfaction | Internal control | Control by powerful others | Control by chance |
|---|--------------------------------|---------------------------------|-------------------------|------------------|----------------------------|-------------------|
| Equal opportunity rather than equity and laws             |                                | .81 (.06)                       | .57 (.05)               |                  |                            | .60 (.07)         |
| Equal opportunity over norms rather than role expectation |                                | .93 (.03)                       | -.50 (.04)              |                  |                            |                   |
| Individual rights rather than equity and laws             | .77 (.05)                      |                                 |                         | -.73 (.06)       |                            | -.60 (.04)        |
| Individual rights rather than norm and role expectation   | .36 (.01)                      | .58 (.01)                       |                         | -.55 (.01)       | -.40 (.01)                 |                   |

*Note.* Only standardized canonical discriminant function coefficients that were significant at or below the .10 level are shown. Level of significance is indicated in parentheses.

standards, and people who fail to adhere to these standards should be held responsible for their deeds.

One advantage of using the belief confrontation technique is that compared with presenting a single statement of duty-based or rights-based morality, presenting a passage on moral issues solicits more spontaneous cognitive responding from participants. However, as each passage in the current study contained many different ideas, some of which are not germane to duty-based versus rights-based morality, the ratings provided by the participants could not be used directly in scoring the participants' moral beliefs. Thus, we developed the following coding scheme for participants' responses.

*Agreement responses* (scored as 1): Participants' responses were coded as duty-based (a) when the participants checked either *mostly agree* or *strongly agree* on the rating scale without making any changes on the passage or (b) when, regardless of their rating, they suggested some modifications or qualifications of the passage, but these modifications or qualifications did not alter the theme of the passage. For example: "People are capable of adhering to society's minimal standards of morality. Therefore, it is the duty of every person to meet these standards, and people who fail to adhere to these standards will eventually be held responsible for their deeds in the long run."

*Disagreement responses* (scored as -1): The participants' responses were coded as rights-based (a) when the participants checked either *mostly disagree* or *strongly disagree*, even when they did not indicate specifically how they would alter the passage or (b) when, regardless of their rating, they indicated that the passage should be changed, and these changes were in conflict with the original (duty-based) theme of the passage. For example: "People are capable of . . . should be held responsible for their deeds. However, the laws of society should not interfere with the basic rights of the individual. Laws should protect society, not force conformity."

The other two passages were extracted from Dworkin (1978). One passage pitted the society's survival against human rights:

In a modern society there are a variety of moral principles which some men adopt for their own guidance and do not attempt to impose upon others. There are also moral standards which the majority places beyond toleration and imposes upon those who dissent . . . A society cannot survive unless some standards are of the second class, because some moral conformity is essential to its life. Every society has a right to preserve its own existence, and the right to insist on some such conformity.

The other passage pitted the protection of community mores against the right to freedom of expression:

Banning pornography abridges the freedom of authors, publishers and would-be readers. . . . The public at present believes that hardcore pornography is immoral, that those who produce it are panders, and that the protection of the community's sexual and related mores is sufficiently important to justify restricting their freedom.

Because some participants disagreed with the irrelevant parts of the passages, Passages 2 and 3 were scored differently. In coding Passage 2, the emphasis was on the thematic sentence "Every society has a right to preserve its own existence, and the right to insist on some such conformity." Responses were assigned a score of -1 if the participants deleted this sentence or made alterations or comments that suggested that societal survival cannot be used to justify the imposition of moral

conformity. Examples of these alterations or comments, shown in italics, are:

. . . some moral conformity of how one deals with another is essential to its life. Every society has to preserve the freedom of its members, and therefore the right to teach others to respect the rights of others.

*Conformity may not always be good if what society wishes to impose upon people goes against their beliefs.*

Other responses were assigned a score of 1.

The focus of analysis for Passage 3 was on the sentence "The protection of the community's sexual and related mores is sufficiently important to justify restricting their freedom." For this passage, responses were accorded a score of -1 when the participants deleted this sentence or made alterations or comments that suggested that protection of social mores does not justify restriction of the right to free expression. Examples of these comments or alterations are:

The protection of the community's sexual and related mores is not sufficiently important to justify restricting people's freedom.

*We are not entitled to abridge the rights of others simply because of personal standards or moral standards grounded on conformity.*

*Freedom of speech remains of ultimate importance.*

All other responses to these statements were assigned a score of 1.

Two independent coders who were blind to the participants' other measures coded the participants' responses to these passages. The intercoder agreement for Passages 1, 2, and 3, respectively, was 93% ( $\kappa = .84$ ), 93% ( $\kappa = .76$ ), and 89% ( $\kappa = .72$ ). It should be noted that the measures and the coding scheme were designed in a way that is strongly biased against rights-based morality. The passages were persuasive messages written by duty-based morality advocates (see Dworkin, 1978), and the alterations generated by the participants had to be clearly consistent with rights-based morality in order for them to be coded as rights-based responses. Otherwise, the responses were classified as duty-based responses. Accordingly, the distribution of scores on these measures was expected to be strongly skewed toward duty-based morality. Thus, to facilitate interpretation, we transformed the raw scores on these measures into z scores before we analyzed the data, although analyses performed on the raw scores yielded results identical to analyses performed on the transformed scores. Our prediction was that entity theorists would have higher scores (indicating stronger duty-based or weaker rights-based moral beliefs) than incremental theorists on all of the three items.

To rule out the possibility that participants' duty-based versus rights-based responses on these measures would be confounded by a general tendency to agree or by a reluctance to make alterations or comments on the passages, we counted the number of words deleted from and the number of words added to each passage for each participant. It should be noted that although entity theorists were expected to make fewer rights-based changes in target statements of passages, they might nonetheless make changes in the other parts of the passages. Thus, we predicted that entity theorists and incremental theorists would not necessarily differ on the above two indexes of response styles.

Another means of assessing duty-based versus rights-based morality was given a preliminary test. As noted above, a crucial distinction between a duty-based morality and a rights-based morality is whether duty or right is deemed as fundamental (Dworkin, 1978). There is a difference between "Since the government has the duty to provide equal opportunity to everybody, therefore, we have the right to equal opportunity" and "The government has the duty to provide equal opportunity to everybody, because we have the right to equal opportunity." The



former statement expresses a duty-based morality because in this statement, a duty is considered to be more fundamental than a right. The latter statement, however, is expressing a rights-based morality because in this statement, a right is considered to be more fundamental. As a preliminary test, we embedded these two items in the 40-item Dogmatism Scale (Rokeach, 1960) as Item 11 and Item 32. Participants were asked to respond to the 42 items on a 6-point scale that ranged from 3 (*I agree very much*) to -3 (*I disagree very much*). We predicted that entity theorists would agree more with the sentence in the duty-based frame than with the one in a rights-based frame, relative to incremental theorists, who were predicted to agree more with the rights-based versus duty-based sentence.

## Results

Using the same criteria as in Study 1, we formed two groups (23 entity theorists and 25 incremental theorists). The results of this study were consistent with our predictions: Entity theorists exhibited a stronger belief in duty-based morality and a weaker belief in rights-based morality than did incremental theorists.

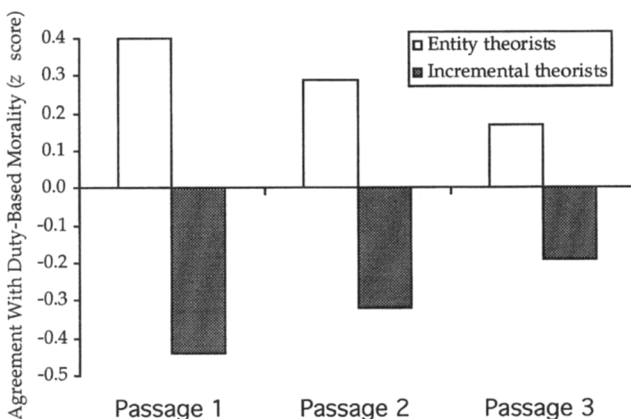
**Moral beliefs.** First, a Theory  $\times$  Passage analysis of variance (ANOVA) was performed on the participants' responses to the three passages. The theory main effect was significant,  $F(1, 42) = 10.88, p < .01$ . As shown in Figure 1, entity theorists exhibited more duty-based morality or less rights-based morality than incremental theorists across the three passages (mean  $z$  score = .29 vs. -.32). Both the passage main effect and the Theory  $\times$  Passage interaction effect were not significant.

This difference, however, was not due to incremental theorists' greater willingness to make alterations or comments on the original statements. A Theory  $\times$  Passage  $\times$  Editorial Style (deletion vs. addition) ANOVA was performed on the number of words deleted from and the number of words added to each statement. Although the editorial style main effect,  $F(1, 42) = 5.05, p < .05$ , and the Passage  $\times$  Editorial Style interaction effect were significant,  $F(2, 84) = 12.94, p < .001$ , no theory effects (main effect or interactions) were significant. Therefore, the differences between entity theorists and incremental theorists on this moral belief measure were not due to a differential

tendency to edit or comment on the passages. In summary, compared with incremental theorists, entity theorists showed greater agreement with duty-based morality and were less likely to make alterations or comments that were consistent with rights-based morality.

A Theory  $\times$  Frame ANOVA was performed on the participants' ratings of the duty-based-framed and the rights-based-framed belief items embedded in the Dogmatism Scale. Only the predicted interaction effect was significant,  $F(1, 42) = 4.45, p < .04$  in this analysis. As Figure 2 shows, when presented with a duty-based-framed and a rights-based-framed item, although both items asserted people's right to equal opportunity, incremental theorists showed stronger agreement with the rights-based-framed item than with the duty-based-framed item ( $M = 1.71$  vs.  $0.55, p < .05$ ). In contrast, entity theorists tended to agree more with the duty-based-framed item than with the rights-based-framed item ( $M = 0.65$  vs.  $0.47$ ), although this difference was not significant. In summary, there was clear evidence across measures that entity theorists typically have stronger duty-based moral beliefs and weaker rights-based moral beliefs than do incremental theorists.

**Dogmatism.** Four factors were extracted from the factor analysis performed on the Dogmatism Scale. These factors were consistent with those found in previous factor analytic studies of the Dogmatism Scale (Kerlinger & Rokeach, 1966). Factor 1 was marked by items expressing closed-mindedness—a belief in one clear truth and intolerance of other opinions. Sample items included “Of all different philosophies which exist in this world, there is probably only one which is correct” and “A group which tolerates too much difference of opinion among its own members cannot exist for long.” Factor 2 was marked by items expressing belief in a cause, Factor 3 was marked by items reflecting a tendency toward proselytization, and Factor 4 was marked by items expressing belief in strong leadership. In our conception, when individuals believe in a fixed reality, they might also believe in one truth and be less tolerant of divergent opinions (i.e., be closed-minded). However, individuals' theories about the malleability of the reality should not have any systematic relationship with their commitment to a cause, engagement in proselytization, or belief in strong leadership. Thus, we would expect entity theorists to score higher than incremental theorists on Factor 1 (One Truth, Closed-Mindedness) but not on other factors. Consistent with these expectations, entity theorists and incremental theorists differed significantly only on Factor 1,  $F(1, 44) = 6.31, p < .05$ , with incremental theorists being less closed-minded than entity theorists ( $M = -1.49$  vs.  $-0.79$ ). The two theories groups, however, did not differ significantly on the other three factors. This finding provides further validation and clarification of the theories construct. An entity theory is not just what the Dogmatism Scale measures. Instead, it is related to the precise factor that one would expect, that is, the belief in one truth and the impermeability of one's belief system.



**Figure 1.** Agreement with duty-based versus rights-based morality by entity theorists and incremental theorists. Higher scores indicate greater agreement with duty-based morality and lower scores indicate greater agreement with rights-based morality.

## Study 3

In this study, duty-based versus rights-based morality was assessed by means of their implications for responses to rule violations. Because duty-based morality treats codes of conduct

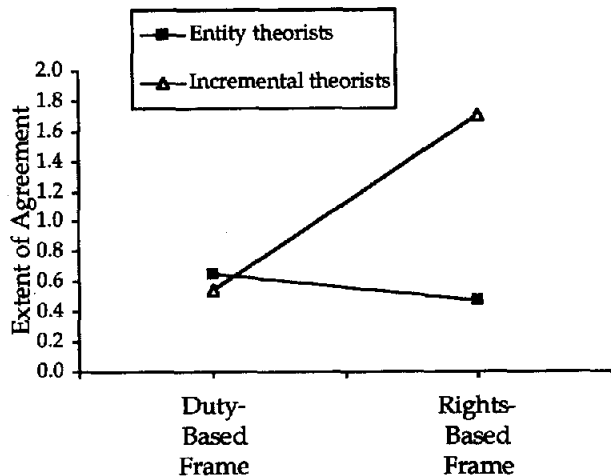


Figure 2. The effects of duty-based versus rights-based framing on entity theorists' and incremental theorists' agreement with the right to equal opportunity. Scale ranged from -3 (indicating disagreement) to 3 (indicating agreement).

as foremost, those who willfully misbehave deserve punishment (Dworkin, 1978). However, good behavior is not entitled to reward because one is merely doing one's duty. Indeed, previous studies (Hamilton, Blumenfeld, & Kushler, 1988) have shown that individuals have a greater tendency to punish undesirable behavior and not to reward desirable conduct when they reason under a duty-based moral framework than when they do not.

In contrast, under a rights-based morality, codes of conduct are merely instrumental to protect people's rights and have no essential value in themselves (Dworkin, 1978). Thus, a rule violation would not be as intrinsically serious. Instead, individuals operating under a rights-based morality might be relatively more appreciative of good behavior and less harsh when they assign punishment to undesirable behavior. Thus, in this study, we asked the participants to assign rewards or punishment to school children who performed desirable or undesirable behavior. We also measured how frequently the participants provided duty-based arguments as justifications for their reward and punishment assignment. We predicted that compared with incremental theorists, entity theorists would display more punitive responses in response to undesirable behavior and less appreciative responses to desirable behavior. Moreover, because of incremental theorists' belief in the malleable nature of the social-moral reality, their reactions to negative behavior should be directed toward changing rather than punishing the negative behavior.

## Method

**Participants.** The participants were 97 Columbia University students (41 men, 56 women) who participated in the study to fulfill course requirements in an introductory psychology course. None of them had participated in the previous two studies.

**Theory measures.** Theories of the world and people's morality were measured using the same measures as in Study 1 and 2. The factor structure of the theory measures obtained in the prior two studies was again replicated (see Table 1).

**Reward and punishment allocation.** To test the prediction that entity theorists, in comparison with incremental theorists, would recommend more punishment for undesirable conduct and less reward for desirable conduct, we adopted and modified four of the classroom scenarios originally created by Hamilton et al. (1988). Each of these scenarios describes either desirable or undesirable classroom behavior among grade-school children. Grade-school classroom conduct scenarios were used because moral training is an integral part of adult-child relationships. Accordingly, when we instructed the participants to take the role of a grade-school teacher, they might more readily have revealed how they think others should behave and why they should behave in this way. Indeed, previous studies using similar scenarios have been successful in activating duty-based morality (Hamilton et al., 1988; Hamilton, Blumenfeld, Akoh, & Miura, 1990). The desirable conduct scenarios were:

The teacher asks the class whether some of them can help her with the preparation work for the school open day. Judy volunteers to help.

The teacher asked Jerry to remove the old posters and notices on the students' notice board, and Jerry does what she requested as soon as possible.

The undesirable conduct scenarios were:

The teacher requires the students to clean up their desk when they leave the classroom, but Debby does not clean up her desk when she leaves.

The teacher asked Larry to remove the old posters and notices on the students' notice board. A week has passed and Larry does not do it.

After reading each scenario, participants were asked to give open-ended responses as to how they would handle the situation and to provide justifications for their responses. In the scenarios that depicted undesirable conduct, they were also asked to indicate what they would say to the child if they decided to talk to him or her privately. We included this question because we expected that in the face of undesirable conduct, individuals who subscribe to a duty-based morality would tend to demand that the offenders comply unconditionally with the moral standards that they had failed to meet. In contrast, we expected that individuals who subscribe to a rights-based morality would attempt to work out with the offenders a mutually acceptable solution based on the principle of mutual respect for individual rights and esteem. Their confrontation style might therefore be more inquiring and negotiation oriented.

Finally, in order to control for the possibility that entity theorists are simply more punitive or negative in general and not just in duty-violation situations, we also included four scenarios about desirable or undesirable achievement behavior or outcomes. Achievement behavior or outcome was included as a control condition because academic achievement is related more to fulfilling intellectual aspirations than to meeting moral standards. Thus, whereas academic achievement usually calls for praise and recognition, undesirable performance less often brings punishment (Hamilton et al., 1988). As such, the hypothesized group differences should have emerged in the conduct scenarios but not in the achievement scenarios. The instructions for the achievement scenarios were the same as those for the conduct scenarios. The four achievement scenarios were (a) "The teacher gives the class a difficult math exercise to do. Alice keeps trying to do it even though it's hard," (b) "Henry works diligently and finishes his homework," (c) "Don does poorly on his report card," and (d) "The teacher gives the class a difficult math exercise to do. Pam stops trying to do her work after making a few unsuccessful attempts." The four conduct scenarios and the four achievement scenarios were presented to the participants in a randomized order, with the same order for each participant.

Open-ended responses to each of these scenarios were coded into the following five dependent variables by two independent coders who were blind to the participants' scores on other measures:

1. *Praise-reward* (only for the four scenarios that depict either desirable conduct or desirable academic performance; intercoder agreement = 92%,  $\kappa = .83$ ): The participants indicated that they would either give a reward to the children, praise them privately or publicly, or show their appreciation. Some examples of these responses are: "I would say to Henry, 'Congratulations! You did a great job!'" and "I would praise him and give him a sticker."

2. *Blame-punishment* (only for the four scenarios that depict either undesirable conduct or undesirable academic performance; intercoder agreement = 100%,  $\kappa = 1.00$ ): The participants indicated that they would punish or blame the children. Some examples of these responses are: "I would scold her" and "I would chastise Larry."

3. *Duty-based justifications*: The participants justified their intended actions by referring to the importance, necessity, or expectation of conforming to a code of conduct or to the demand of the teacher (intercoder agreement = 97%,  $\kappa = .84$ ). Some examples of duty-based justifications are: "... because people must learn to follow directions or society could not function" and "... because that was the rule in the classroom."

4. *Use of directives* (only for the four scenarios that depicted either undesirable conduct or undesirable academic performance; intercoder agreement = 90%,  $\kappa = .76$ ): The participants indicated that if they were to talk to the children privately they would issue a command to the children or require that certain actions be taken by the children. Examples of using directives are: "Take care of the board now" and "Take down the posters today or you'll be in trouble."

5. *Negotiation or assurance* (only for the four scenarios that depicted undesirable conduct or undesirable academic performance; intercoder agreement = 96%,  $\kappa = .83$ ): The participants indicated that if they were to talk to the children privately, they would negotiate a mutually acceptable course of action with them, respect the children's right to choose whether or not to carry out a school chore, or attempt to protect the children's self-esteem by assuring them of their ability to solve difficult problems. Examples of such responses are: "Do you want the job or is it too much for you?" and "... you have the ability and you only need to apply it."

Responses that fit the coding criteria for a variable in a scenario were given a score of 1 on that variable in that scenario. Otherwise, they were given a score of 0 on that variable for that scenario. For each variable, scores for scenarios with the same domain and behavioral desirability were aggregated. For example, the praise-reward scores for two conduct scenarios depicting desirable behavior were summed. Accordingly, for each of the four Domain  $\times$  Behavior Desirability conditions, the possible range of score for each variable was 0 to 2.

## Results

*Overview.* As predicted, compared with incremental theorists, entity theorists recommended more punishment for undesirable conduct and less reward for desirable conduct. They also gave more duty-based justifications for their reward and punishment allocation, used directives more frequently, and used negotiation and assurance less frequently. Also as expected, these group differences were significant in the conduct domain and not in the achievement domain.

*Reward and punishment assignment.* On the basis of the criteria used in Studies 1 and 2, 34 participants were classified as entity theorists and 25 were classified as incremental theorists. Recall that after reading each scenario, we asked the participants to describe how they would handle the situation if they were

the teacher. In accord with the coding system described earlier, responses were coded, and a reward (or punishment) score was computed for each participant in each of the four Domain  $\times$  Behavioral Desirability conditions (see *Method* section). We then performed a Theory  $\times$  Domain  $\times$  Behavioral Desirability ANOVA on these reward (punishment) scores and found a significant Theory  $\times$  Domain  $\times$  Behavioral Desirability interaction effect,  $F(1, 57) = 5.55, p < .05$ . As shown in Figure 3, in the conduct domain, entity theorists, compared with incremental theorists, recommended more punishment in the case of undesirable conduct ( $M = 0.38$  vs.  $0.12$ , possible range of 0 to 2),  $F(1, 57) = 3.85, p = .05$ , and less reward in the case of desirable conduct ( $M = 0.44$  vs.  $0.84$ ),  $F(1, 57) = 4.39, p < .05$ . However, in the achievement domain, the two theory groups did not differ in the magnitude of either their praise ( $M = 1.32$  for entity theorists vs.  $1.44$  for incremental theorists) or blame ( $M = 0.0$  for entity theorists vs.  $0.003$  for incremental theorists) assignment. These findings clearly support our hypotheses. Moreover, the nonsignificant theory effects in the achievement domain suggest that the response pattern found in the conduct domain was not due to general negativity on the part of the entity theorists.

The behavioral desirability main effect was significant,  $F(1, 57) = 125.43, p < .0001$ . Over the conduct and achievement scenarios, participants were more conservative in recommending punishment ( $M = 0.14$ ) than reward ( $M = 0.99$ ). Given this finding, it is particularly interesting that entity theorists, as can be seen in Figure 3, did not recommend more reward than punishment in the conduct domain. The domain main effect was also significant,  $F(1, 57) = 14.59, p < .001$ . However, this effect should be interpreted in light of the significant Domain  $\times$  Behavioral Desirability interaction,  $F(1, 57) = 39.23, p < .0001$ . Specifically, more reward was recommended in the achievement domain ( $M = 1.37$ ) than in the conduct domain ( $M = 0.61$ ),  $p < .01$ , but more blame was recommended ( $M = 0.27$ ) in the conduct domain than in the achievement domain ( $M = 0.02$ ),  $p < .05$ .

In summary, the findings suggest that compared with the incremental theorists, the entity theorists were more likely to recommend punishment in the case of undesirable conduct and less likely to recommend reward in the case of desirable conduct.

*Duty-based justifications.* Did entity theorists also tend to justify their reward and punishment recommendations with duty-based reasons? To test this hypothesis, we performed a Theory  $\times$  Domain  $\times$  Behavioral Desirability ANOVA on the number of duty-based justifications suggested by the participants. The theory main effect was significant,  $F(1, 57) = 4.03, p = .05$ . Entity theorists, on the whole, gave more duty-based justifications than incremental theorists ( $M = 0.40$  vs.  $0.26$ ). Although the Theory  $\times$  Domain interaction was not significant,  $F(1, 57) = 2.57, p = .11$ , as Figure 4 shows, the significant theory main effect was contributed to mainly by the theory effect in the conduct domain. Indeed, planned comparisons revealed that in the conduct domain, entity theorists suggested significantly more duty-based justifications than incremental theorists ( $M = 0.68$  vs.  $0.44$ ),  $F(1, 57) = 4.14, p < .05$ . Again, the between-group difference was not significant in the achievement domain ( $M = 0.12$  and  $0.08$  for entity theorists and incremental theorists, respectively,  $F < 1$ ).

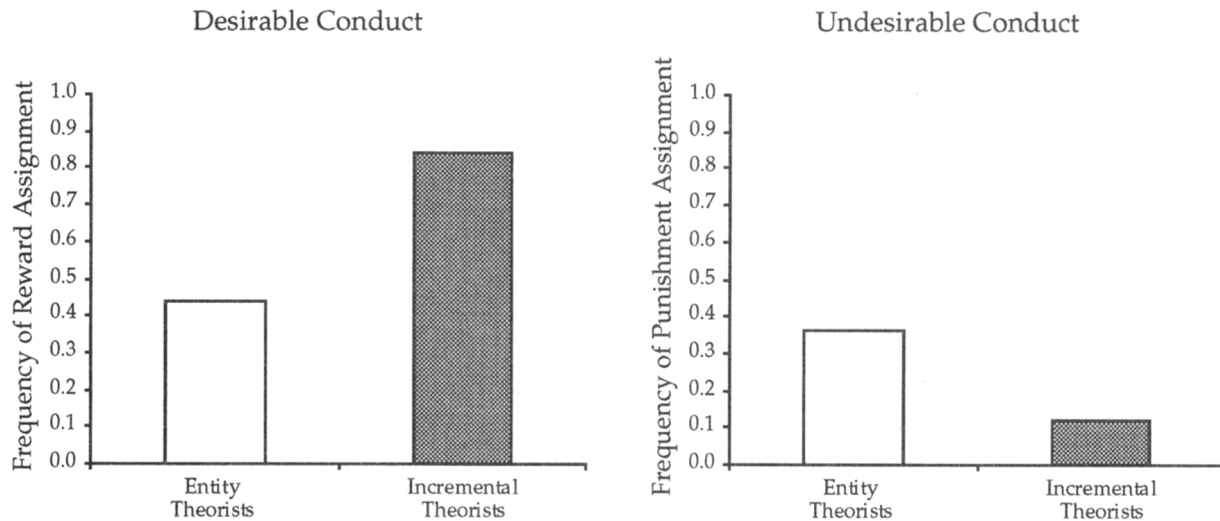


Figure 3. Reward and punishment assignment on open-ended responses in the conduct domain as a function of implicit theories about the world and people's morality.

The domain main effect was also significant,  $F(1, 57) = 54.84, p < .0001$ . More duty-based justifications were provided in the conduct domain than in the achievement domain ( $M = 0.58$  vs.  $0.11$ ), suggesting again that meeting moral standards was less relevant in the achievement domain than in the conduct domain. Finally, the Domain  $\times$  Behavioral Desirability interaction was significant,  $F(1, 57) = 15.51, p < .0001$ . Follow-up analyses revealed that more duty-based justifications were suggested in the conduct domain than in the achievement domain for both desirable and undesirable behavior, but this difference was larger when the behavior was undesirable ( $M = 0.73$  vs.  $0.19$ ) than when the behavior was desirable ( $M = 0.42$  vs.  $0.02$ ),  $t(57) = 4.15, p < .0001$ .

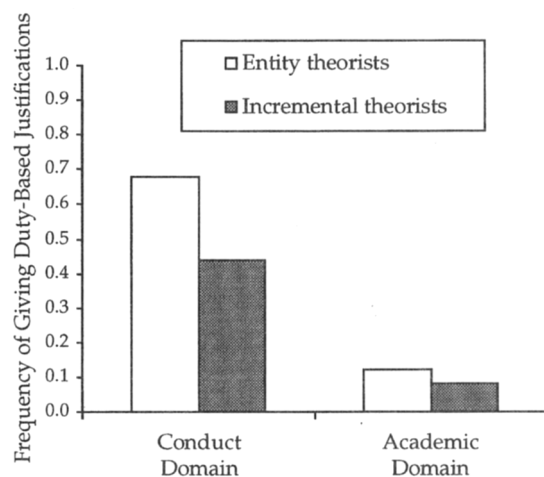


Figure 4. Mean number of duty-based reasons generated by entity theorists and incremental theorists to justify their reward and punishment assignment in the conduct domain and in the academic domain. Scale ranged from 0 to 2.

To summarize, the findings for the duty-based justifications support our hypothesis. Entity theorists were more likely to provide duty-based justifications for assigning rewards and punishment than were incremental theorists. Again, this pattern was found in the conduct domain but not in the achievement domain.

*Use of directives and negotiation assurance.* Finally, for those scenarios depicting undesirable conduct or achievement performance, we also asked the participants what they would say to the children if they were to talk to them privately. We expected that entity theorists would more frequently use directives and less frequently use negotiation and assurance than would incremental theorists. We thus subjected the use of directives and negotiation-assurance to two separate Theory  $\times$  Domain ANOVAs. The Theory  $\times$  Domain interaction for the use of directives was significant,  $F(1, 57) = 8.38, p < .01$ . As shown in Figure 5, in the conduct domain, entity theorists used directives more frequently than incremental theorists ( $M = 1.17$  vs.  $0.64$ ),  $F(1, 57) = 5.99, p < .05$ . The between-group difference was not significant in the achievement domain ( $M = 0.26$  for entity theorists and  $M = 0.40$  for incremental theorists,  $F < 1$ ), again supporting our hypothesis. Consistent with the reward-punishment and duty-based justification findings, the domain main effect was also significant,  $F(1, 57) = 26.64, p < .0001$ . More directives were used in the conduct domain than in the achievement domain ( $M = 0.92$  vs.  $0.32$ ).

The theory main effect for the use of negotiation and assurance was also significant,  $F(1, 57) = 17.06, p < .0001$ . Figure 5 shows that incremental theorists mentioned the use of negotiation and assurance more frequently than entity theorists ( $M = 0.32$  vs.  $0.09$ ). This effect, however, cut across both domains instead of being localized in the conduct domain. One possible reason for the domain generality of this effect is that regardless of whether the subject of conversation was academic performance or conduct, incremental theorists might have perceived the teacher-student conversation as (a) involving two equally respect-worthy individuals capable of negotiating a mutually

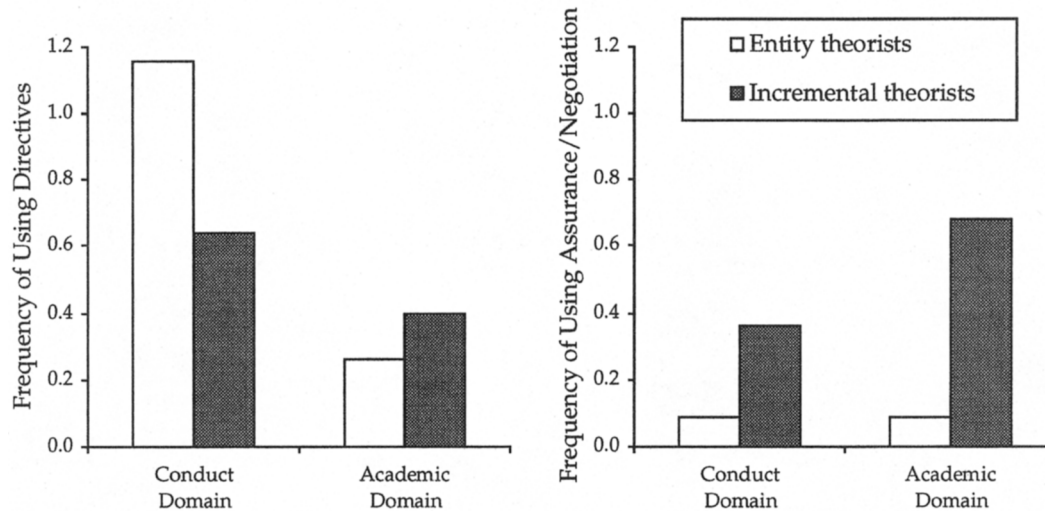


Figure 5. Mean number of times entity theorists and incremental theorists mentioned the use of directives and the use of negotiation and assurance in the conduct domain and in the academic domain when talking to children with undesirable conduct. Scale ranged from 0 to 2.

acceptable solution and as (b) entailing a teaching and confidence-building role for the adult. In contrast, entity theorists, presumably more focused on the students' duty versus rights, hardly mentioned the use of negotiation and assurance at all when they talked to the children ( $M = 0.09$ ).

In summary, the results of Study 3 showed that, consistent with a duty-based morality, entity theorists, compared with incremental theorists, were more likely to recommend punishment for children with undesirable conduct and were less likely to recommend reward for children with desirable conduct. In contrast, incremental theorists, consistent with a rights-based morality, focused far more on reward than on punishment in the conduct situation. Compared with entity theorists, they also used directives less frequently when talking to children with undesirable conduct and used negotiation and assurance more frequently when talking with children who exhibited undesirable behavior in the conduct and academic domains. Moreover, the lack of significant between-group differences for most comparisons in the achievement domain rules out the possibility that entity theorists' tendency to recommend more punishment in the conduct domain was due to a general negativity or punitiveness in interpersonal relationships.

#### Study 4

##### Method

In Study 3, we showed that entity theorists were more punitive than incremental theorists in their reactions toward children who displayed negative conduct. However, both of the negative conduct scenarios used in Study 3 were scenarios of duty violation. Thus, it is unclear from this study whether entity theorists would also react more negatively toward violations of rights. Our model suggests that relative to entity theorists, incremental theorists, believing in the malleability of the social-moral reality, would display more education-oriented responses and less punishment-oriented responses to undesirable behavior, regardless of whether the undesirable behavior was a violation of duty or

rights. However, it is also possible that compared with entity theorists, incremental theorists, being more concerned with protection of rights, would react more strongly toward rights violation and recommend harsher sanction for rights violation. To address this issue, we asked undergraduate students from Columbia University to respond to a rights violation scenario. Among the 98 participants (48 men, 50 women), 25 were classified as entity theorists and 25 were classified as incremental theorists. After their implicit theories had been assessed in an allegedly unrelated study, they read the following scenario, which depicted how students' right to fair treatment was infringed on. We had the participants take the role of this student and describe what they would do in this situation. The scenario was as follows:

At the beginning of an introductory calculus class, the professor told the class that they would be given eight problem sets throughout the course, each contributing 12.5% to the final grade. The professor also promised to set the cut-off point for an A grade at 80. After the seventh problem set was given back to the students, you found that you had already accumulated 81 points. Therefore, you did not finish the last problem set and spent your time preparing for the finals in other courses. It turned out that the professor raised the cut-off point to 85 because too many of the students scored above 80. Consequently, you only got a B+ for the course.<sup>4</sup>

Participants' responses were coded by two coders who were blind to the participants' scores on the implicit theory measures, using the following coding criteria. *Action* included meeting with the professor or his higher authorities (e.g., the department head or the deans). *Inaction* included acceptance of the unjust situations without protest. Responses that did not indicate any specific course of action were coded as *unclassified*, about 8% of the responses (interrater agreement = 100%,  $\kappa =$

<sup>4</sup> Most rights violations can also be construed as duty violations (e.g., violation of a professor's duty to be honest and fair). To focus participants' attention on rights violation, we had the participants play the role of the unfairly treated student. How entity and incremental theorists reacted to scenarios that were weighted more evenly in the two directions (duty violation and rights violation) was examined in Study 5.

1.00). Actions mentioned were further categorized into (a) actions directed toward punishment or retaliation, (b) actions directed toward changing the transgressor's moral behavior, or (c) other actions (inter-rater agreement = 96%,  $\kappa = .88$ ). The first category included action that was motivated by the desire to display hostility toward the professor or to retaliate. The second category included action that aimed at persuading the professor to be fair by confronting him with a fairness principle.

## Results

The two theory groups did not differ in the likelihood of initiating action (i.e., meeting with the professor or higher authorities),  $\chi^2(2, N = 50) = 0.17, p = .92$ . Nineteen (out of 25) entity theorists and 20 (out of 25) incremental theorists mentioned that they would initiate some action to deal with the rights violation. However, as predicted by our model, 21% of the entity theorists who intended to take action, but none of the incremental theorists, stated that they would seek to punish the professor. In contrast, 35% of the incremental theorists who intended to take action, in comparison with 0% of the entity theorists, stated they would try to persuade the professor to go back to the fairness principle that he had violated,  $\chi^2(2, N = 39) = 15.37, p = .0001$ . The following comments illustrate the typical punishment-oriented responses given by entity theorists:

I think the professor is a junk [*sic*] and I would tell him.

I'd be ticked as hell and be in the Dean's office at 9:00 the next morning.

and a typical education-oriented response made by incremental theorists:

I would confront the professor and remind him that he has promised not to raise the cut-off and that it was unfair of him to do it. He should not have pretended that it would be fair and should not have lied that he would not raise the cut-off.

In summary, the data from Studies 3 and 4 together suggest that entity theorists are relatively more oriented toward punishment and that incremental theorists are more oriented toward education in responses to both duty violation (Study 3) and rights violation (Study 4).

## Study 5

Past research has shown that American society is more rights oriented whereas Asian societies are more duty oriented in their moral orientation (e.g., Chiu & Hong, 1997; Shweder & Miller, 1985). If entity versus incremental theories are related to duty-versus rights-based morality, are there more entity theorists in Asian societies than in American societies? Does the relationship between implicit theories and conceptions of morality hold in Asian societies as in American societies? Specifically, do entity and incremental theorists differ in their tendency to issue directives versus negotiation/reassurance when a child transgresses, and do they differ in the duty- versus rights-based justification they give for their reaction? To answer these questions, we replicated Study 3 using a sample of Hong Kong Chinese, who have been shown to have a strong duty-based orientation (see Chiu & Hong, 1997).

## Method

One hundred fifty-six Hong Kong Chinese undergraduate or junior college (Grade 12) students volunteered to participate in the research. They were given the morality theory measure and the world theory measure, as in Studies 1–4. Then, they responded to an artistic aptitude test, which was used as a filler task to conceal the connection between the theory assessment and the moral belief assessment. Finally, they were presented with four scenarios and, for each scenario, were asked to indicate how they would respond to the protagonist's behavior, how they would justify their responses, and what they would say to the protagonist if they were to talk to him or her privately.

Two scenarios were identical to the duty-violation scenarios used in Study 3, except that the names of the protagonists were changed to Chinese names. The other two were new scenarios that could be seen both ways, either as duty violations or rights violations. These ambiguous scenarios could evoke both duty-based and rights-based justifications for recommended actions and thus allowed us to test the prediction that entity theorists would be more likely to justify their recommended actions with duty-based reasons, whereas incremental theorists would be more likely to justify their recommended actions with rights-based reasons. The two ambiguous scenarios were (a) "Waiman took a peek at his classmate's report card when his classmate was not in the classroom" (violation of classroom rule and others' right to privacy) and (b) "Wingmin took from the class library a book she liked and did not return it to the library" (violation of library regulations and other students' right to read the book).

Two independent coders who were blind to the participants' theories coded the responses to the scenarios using the coding scheme developed for Study 3. Inter-coder reliability was 99% ( $\kappa = .96$ ) for punishment, 96% ( $\kappa = .81$ ) for duty-based justifications, 90% ( $\kappa = .81$ ) for directives, and 92% ( $\kappa = .77$ ) for assurance-negotiation. The coders also coded, for each scenario, whether or not the participants mentioned a rights-based justification for their responses. A response was classified as rights-based justifications when the participant justified his or her responses to the protagonist by (a) asserting the principle that others' rights should be respected or that everybody is entitled to his or her rights or (b) mentioning that the protagonist violated other people's rights. Examples of rights-based justifications were: "Human rights must be protected!" and "His behavior violated his classmate's right to privacy."

Inter-coder agreement was 96% ( $\kappa = .76$ ) for this variable. As in Study 3, responses that fit the coding criteria for a variable in a scenario were given a score of 1 on that variable for that scenario. Otherwise, they were given a score of 0 on that variable for that scenario. For each variable, scores for duty violation scenarios and the ambiguous scenarios were aggregated. Accordingly, for the duty violation scenarios and for the ambiguous scenarios, the possible range of score for each variable was 0 to 2.

## Results

On the basis of the criteria used in Studies 1, 2, 3, and 4, 62 participants were classified as entity theorists and 17 were classified as incremental theorists. Recall that the number of entity theorists and incremental theorists was roughly equal in American samples in Studies 1, 2, 3, and 4. Across the four studies, the ratio of entity theorists to incremental theorists was 1.09 to 1. However, in the Chinese sample in Study 5, the ratio was 3.65 to 1. The difference in the relative distribution of entity versus incremental theorists in the American samples and the Chinese sample was statistically reliable,  $\chi^2(1, N = 303) = 16.64, p < .001$ . Such difference is consistent with our idea that entity versus incremental theory coheres with a duty- versus

rights-based moral orientation. As noted, previous research has found that compared with Americans, Chinese are more duty oriented and less rights oriented in their moral beliefs. The present research shows that in a society in which duty-based morality is dominant, there tend to be relatively more entity theorists.<sup>5</sup>

*Punishment, directives, and assurance–negotiation.* An Implicit Theory (entity vs. incremental)  $\times$  Scenario Type (duty violation vs. ambiguous scenarios) ANOVA was performed on the likelihood of punishment assignment. Neither the implicit theory main effect nor the interaction effect was significant. However, as in Study 3, entity theorists were more likely to punish the target than were incremental theorists ( $M = 0.20$  vs.  $0.09$ ), although the difference was not significant,  $F(1, 77) = 1.11$ , *ns*. Most participants indicated that they would want to know more about the transgressor's motivation before they made their decisions about punishment. Such a response tendency, which is consistent with the more contextualized approach to social knowing among Asians (see Miller & Bersoff, 1994; Morris & Peng, 1994), could have imposed a ceiling on entity theorists' tendency to recommend punishment in the present study.

We thus looked at how entity and incremental theorists would talk to the child. As in Study 3, entity theorists were significantly more likely than incremental theorists to issue orders and directives ( $M = 1.19$  vs.  $0.65$ ). An Implicit Theory  $\times$  Scenario Type interaction ANOVA performed on the likelihood of using directives revealed a highly significant implicit theory main effect,  $F(1, 77) = 8.28$ ,  $p < .01$ . Both scenario type main effect and the interaction were not significant ( $F < 1$ ). Thus, entity theorists issued more orders and directives for both types of scenarios.

By contrast, incremental theorists were much more likely to use assurance and negotiation when they talked to the child ( $M = 0.74$  vs.  $0.15$ ),  $F(1, 77) = 30.66$ ,  $p < .001$ . Both the scenario type main effect and the Implicit Theory  $\times$  Scenario Type interaction were not significant. In short, as in Study 3, entity theorists, in line with a more duty-based moral orientation, were more likely than incremental theorists to use directives and less likely to use assurance–negotiation to deal with undesirable behaviors.

*Duty- and rights-based justifications.* An Implicit Theory  $\times$  Scenario Type  $\times$  Type of Justification (duty based vs. rights based) performed on the justifications provided by the participants revealed a significant type of justification main effect,  $F(1, 77) = 4.66$ ,  $p < .05$ , a significant Scenario Type  $\times$  Type of Justification interaction,  $F(1, 77) = 29.92$ ,  $p < .001$ , and a significant Implicit Theory  $\times$  Type of Justification interaction,  $F(1, 77) = 7.00$ ,  $p < .01$ . No other effects were significant. Participants offered more duty-based ( $M = 0.32$ ) than rights-based justifications ( $M = 0.10$ ). However, the relative prevalence of duty-based and rights-based justification was also related to scenario type: As in Study 3, the duty violations scenarios solicited duty-based justifications ( $M = 0.53$ ), but no rights-based justifications ( $M = 0.0$ ). As we expected, the ambiguous scenarios generated both duty-based justifications ( $M = 0.11$ ) and rights-based justifications ( $M = 0.20$ ).

Were entity theorists more likely than incremental theorists to offer duty-based justifications for their action in the duty

violation scenarios? In addition, did entity theorists tend to relate the undesirable behaviors depicted in the ambiguous scenarios to duty violation? Did incremental theorists tend to relate the same behaviors to rights infringement? The significant Implicit Theory  $\times$  Type of Justification interaction indicated that entity theorists were more likely to offer duty-based justifications ( $M = 0.36$ ) than rights-based justifications ( $M = 0.07$ ),  $t(78) = 5.00$ ,  $p < .001$ , and that incremental theorists were more likely than entity theorists to offer rights-based justifications ( $M = 0.21$  vs.  $0.07$ ),  $t(77) = -2.30$ ,  $p < .05$ . As Table 4 shows, consistent with our predictions, entity theorists were more likely than incremental theorists to offer duty-based justifications for both types of scenarios. In addition, for the ambiguous scenarios, incremental theorists offered only rights-based justifications ( $M = 0.41$ ) and no duty-based justifications ( $M = 0.0$ ), whereas entity theorists offered the same number of duty-based justifications and rights-based justifications ( $M = 0.15$ ).

*Summary.* The present research found that, as expected, there were more entity theorists among Chinese students than among American students. Despite this finding, among Chinese students, those who subscribed to an entity theory of social–moral reality were more likely to reason and respond in ways that were consistent with duty-based moral beliefs than were those who subscribed to a malleable theory.

## General Discussion

Taken together, this research shows that individuals' implicit theories and their moral beliefs are internally coherent. Specifically, in both the United States (a relatively rights-oriented country) and Hong Kong (a relatively duty-oriented society), individuals who conceive of the world and other people's moral character as fixed tend to have a stronger preference for duty-based moral beliefs than do individuals who conceive of these factors as malleable. In contrast, incremental theorists tend to have a stronger preference for rights-based moral beliefs than do entity theorists. How do we account for this consistent relation between implicit theories and moral beliefs? Although these findings are highly consistent, they may seem somewhat novel. Therefore, we will first consider some possible alternative explanations.

### Some Possible Alternative Explanations

*Self-presentation.* As noted in Study 1, neither the morality theory measure nor the world theory measure is correlated with standard measures of self-presentation concerns (e.g., the Social Desirability Scale, Paulhus, 1984, and the Self-Monitoring Scale, Snyder, 1974; see Dweck, et al., 1995b). Thus, it is not

<sup>5</sup> It is interesting to note that in the Hong Kong sample, 85% of the "unclassified" participants (those with one entity theory and one incremental theory) endorsed an entity world theory and an incremental morality theory (compared with 43% of the unclassifieds in the United States sample). When one also considers the classified participants, the Hong Kong sample showed an overwhelming belief in a fixed world, but not necessarily a fixed moral character.

Table 4  
*The Relation of Implicit Theories to Duty-Based and Rights-Based Justifications (Study 5)*

| Scenario                    | Entity theorists<br>( <i>n</i> = 62) |           | Incremental theorists<br>( <i>n</i> = 17) |           |
|-----------------------------|--------------------------------------|-----------|---|-----------|
|                             | <i>M</i>                             | <i>SD</i> | <i>M</i>                                  | <i>SD</i> |
| Duty violation              |                                      |           |   |           |
| Duty-based justifications   | .58                                  | .71       | .35                                       | .61       |
| Rights-based justifications | .00                                  | .00       | .00                                       | .00       |
| Ambiguous                   |                                      |           |   |           |
| Duty-based justifications   | .15                                  | .36       | .00                                       | .00       |
| Rights-based justifications | .15                                  | .36       | .41                                       | .62       |

that incremental theorists are more likely than entity theorists to want to present themselves more favorably by endorsing rights-based moral beliefs or by recommending less punishment.

*Optimism–pessimism.* Intuitively, one may think that individuals who believe that people's morality or the world are fixed are more pessimistic than those who believe that these factors can be changed. Moreover, those who have a more negative view of others and the world may also want people to operate on duties and not on rights, and they may want to punish immoral behavior to enforce morality. However, these intuitions were not supported by the data from our research. In Study 1, confidence in other people and the world was not correlated with either the world theory ( $r = .12$ ) or the morality theory ( $r = .17$ ). More important, as Table 3 shows, the confidence measures did not predict preference for duty-based versus rights-based morality as the theory measure did. These findings suggest that the relation between implicit theories and moral beliefs found in this research was not mediated by optimism–pessimism.

*Relation to other individual differences variables.* Does a preference for duty-based and rights-based morality reflect the participants' political conservatism and liberalism? If it does, to what extent was the relation between implicit theories and moral beliefs found in this research mediated by conservatism–liberalism or by other individual difference variables that have been found to correlate with conservatism and liberalism (e.g., the just world belief and locus of control)?

First, it should be noted that duty- versus rights-based morality is distinct from conservatism and liberalism at the definitional level. By definition, conservatism is a set of social political beliefs that emphasize social stability and a distrust in popular democracy, whereas liberalism is a set of social political beliefs that emphasize progressive social change and popular democracy (Kerlinger, 1984). Both conservatives and liberals endorse rights, although they may place higher priorities on different kinds of rights. For instance, whereas conservatives place more emphasis on property rights and the right to enjoy the wealth one has accumulated, liberals tend to emphasize the rights of minorities. Finally, duty is not central to the definitions of conservatism and liberalism. Indeed, in Kerlinger's study of social concepts, "duty" did not load on either the conservatism factor or the liberalism factor.

Consistent with this, in one validation study of the implicit theories measures (see Dweck et al., 1995b), participants were

also given Kerlinger's (1984) Social Attitudes Referent Scale IV and the Social Attitude Scale. In this study, neither the morality theory nor the world theory measure correlated with conservatism or liberalism measured by the two Kerlinger scales.

Furthermore, in another validation study (see Dweck et al., 1995b), no difference was found between entity theorists ( $n = 41$ ) and incremental theorists of the world and morality ( $n = 48$ ) on the Just World Belief Scale (a scale shown to be correlated with conservatism–liberalism),  $t(87) = 1.61, ns$ . Finally, the participants in Study 1 also filled out the Levenson (1974) locus of control questionnaire. As the discriminant function analyses summarized in Table 3 revealed, when the effects of implicit theories and locus of control were considered together, implicit theories remained significant predictors of duty- versus rights-based morality.

In summary, not only do these findings attest to the discriminant validity of implicit theories, they also point to the potential theoretical importance of distinguishing duty-based versus rights-based morality from political conservatism and liberalism in future research.

#### *A Meaning System Approach to Moral Beliefs: A Proposal*

How do we account for the seemingly robust relation between implicit theories and moral beliefs?

Given the current view that much of cognitive and personality development consists of the construction of personal epistemologies or meaning systems (Epstein, 1989; Janoff-Bulman, 1985; Murphy & Medin, 1985), we propose that implicit theories may be viewed as basic assumptions in an individual's belief or meaning system in a particular domain. Such a system serves many functions. For example, it represents and organizes existing knowledge and beliefs and provides a framework for understanding the meaning of events in that domain. In the moral domain, the present research demonstrates how an individual's implicit theories may provide a framework for judging (a) whether a state of affairs is moral and (b) what kind of responses would be appropriate.

Entity theorists, by definition, believe in a more static, stable social–moral order. To them, the major sources of moral actions—other people or the world and its institutions—are believed to be fixed. In such a static moral order, the defining moral issue is whether the sources of moral actions conform to a set of duties and obligations prescribed by a stable and orderly system. The existing codes of conduct are seen as of fundamental value, and the primary function of justice and morality is to maintain such codes. Thus, to entity theorists, compared with incremental theorists, violations of the existing codes of conduct (e.g., role expectations) are seen as less acceptable (Study 1), and moral conformity and maintenance of societal stability are seen as more important than individual rights and liberty (Study 2). Consistent with this orientation, entity theorists are less tolerant of deviance. To preserve the status quo, they are more prepared to sanction undesirable behavior (Studies 3 and 4), and they are relatively more likely to enforce morality by imposing punishment (Studies 3 and 4), restating the moral obligations or issuing moral directives to the "transgressors" (Studies 3 and 5). They also tend to believe that good conduct represents



merely doing one's duty and does not deserve reward. Thus, compared with incremental theorists, they also tend to be less appreciative of good conduct (Study 3).

In contrast, incremental theorists, by definition, believe in a malleable, perhaps evolving social-moral reality. Each moral agent is capable of developing his or her individual morality. In this dynamic view of the social-moral reality, the existing social-moral order does not have absolute moral authority over individual moral agents. Instead, social actions should be guided by such moral principles as individual rights and liberty. The defining moral issue is whether the existing social arrangement, codes of conduct, and life practices are working to foster and protect individual rights and liberty. Moreover, the status quo can be changed when these elements become obstructive of these ends. As stated in the Declaration of Independence, "governments long established should not be changed for light and transient causes," but such changes are justified after "a long chain of abuses [of human rights]." Consistent with this orientation, incremental theorists, compared with entity theorists, tend to find rights infringement more morally objectionable (Study 1), and they are less likely to agree to sacrifice individual rights and freedom for the purpose of maintaining societal stability (Study 2). Moreover, believing that undesirable behaviors do not represent a failure to fulfill one's moral obligations and that individuals are capable of developing their morality, compared with entity theorists, incremental theorists are appreciative of good behavior and believe less in punishment and more in negotiation and education (Studies 3, 4, and 5).

In short, the belief that the social-moral reality is fixed is more strongly associated with (a) a moral orientation in which the major sources of moral actions (individuals and institutions) are expected to fulfill a set of prescribed duties and (b) a primary concern with maintaining the status quo. In contrast, a belief that the social-moral reality is malleable is more strongly associated with (a) a moral orientation in which moral actions and social practices are guided by such moral principles as individual rights and (b) the belief that the status quo can be changed to foster and promote individual rights.

### *Implications for Future Research*

What are the implications of this meaning system approach for future research on the relations among moral beliefs, moral goals, and moral action? Previous studies have shown that the correspondence between moral cognition and moral action is often low (Mischel & Mischel, 1976). In part this lack of correspondence may be because moral cognitions are not always translated into moral actions. As Rest (1983) and Dweck and Leggett (1988) have suggested, what is missing in most cognitive theories of morality is the motivational mechanism that would translate a moral decision into a moral action. For example, many individuals who feel that inequalities and infringement of rights are unjust or immoral and who perceive that these injustices could potentially be rectified may do little themselves to redress these injustices. One possible explanation is that solving such problems is not a salient goal in their day-to-day activity—it is not a priority compared with other personal goals. Thus, further research is needed to determine the role of goal value or salience in prompting moral action.

Moreover, even when individuals are committed to solving a particular moral issue, the ways in which they approach this issue are inevitably affected by what they believe about morality, by what they construe as a moral situation, by what they define as a just or moral act, by what they believe to be appropriate responses to unjust or immoral acts, and by their particular moral goals (Rest, 1983). As this research suggests, each of these may be related to an individual's implicit worldview. For example, different theorists may have different ideas about what constitutes an appropriate response to immoral acts. In Studies 3, 4, and 5, in the face of undesirable behaviors, entity theorists appeared to believe more strongly than incremental theorists that the appropriate action was to reprimand the transgressor. In contrast, incremental theorists seemed to believe more strongly in assurance and negotiation in these situations.

This pattern implies that entity theorists and incremental theorists may pursue different moral goals. Indeed, although not addressed directly in this research, in Studies 3, 4 and 5, entity and incremental theorists appeared to have different goals in their proposed interactions with the "transgressors." Entity theorists' goal was to mete out consequences for rule or rights violations, whereas incremental theorists' goal was to clarify the options for the transgressors and bolster their confidence so that they could attain their self-chosen goal (cf. Dweck & Leggett, 1988, discussion of how entity theories promote "judgment goals" and how incremental theories promote "development goals"). In short, the meaning system approach we have proposed can potentially be used as a lead to explore the relations among moral cognitions, moral goals, and moral actions.

Furthermore, past research has found clear cross-cultural differences in the conception of morality, with Western countries being more oriented toward rights-based morality and Asian countries more oriented toward duty-based morality (e.g., Chiu & Hong, 1997; Shweder & Miller, 1985). As shown in the present research, there appear to be more entity theorists among Hong Kong Chinese than among Americans. Since an entity theory is linked to duty-based morality, the differences between American and Asian societies in the relative importance of duties versus rights may be related to the differences in the distribution of entity versus incremental theorists in these societies. This possibility should be of interest to researchers who study cross-cultural differences in moral values.

### *Conclusion*

In conclusion, the coherent organization of meaning within a person has emerged as a prominent topic in psychology during the 1980s. We have suggested one such meaning system. The fixed versus malleable belief may also be core beliefs that define different worldviews (Dweck et al., 1995a). For example, Alfred North Whitehead (1929, 1938) used the static versus dynamic dimension to compare and contrast different scientific systems and theories. Piaget and Garcia (1983) viewed the static-changing distinction as a basic distinction that differentiates various conceptions of the world. Finally, Pepper (1942) identified four different worldviews, which he believed could be combined into two more central meaning systems, one characterized by the existence of fixed relations among static constituent elements and the other by a more dynamic, malleable sys-

tem of processes (see also Johnson, Germer, Efran, & Overton, 1988). Although the theory we propose here is tentative and subject to refinement by future research, we believe it opens up possibilities for investigating moral beliefs, moral decision making, and moral behavior within an individual's meaning system.

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Received October 25, 1995

Revision received January 31, 1997

Accepted February 10, 1997 ■